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Record of a Southern Elephant Seal (*Mirounga leonina* Linnaeus) off the Isla Verde, Uruguay

von

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With 2 plates and 1 table

The southern elephant seal that belongs to the family Phocidae has been submitted to very thorough biological examination (MATHEWS, 1952; LAWS, 1953, 1956 a, b; SCHEFFER, 1958; ARETAS, 1951). It is one of the most investigated species of the family. Its distribution is circumpolar and it is found on most of the subantarctic islands. South Georgia has the largest breeding population (310 000 animals, KING, 1964), followed by Kerguelen and the Macquarie Islands. North of the Tierra del Fuego it occurs along the southern part of the coast of Chile and the coast of Argentina. The northern limit of its range on the Atlantic side of South America is given as Isla de Lobos (Uruguay; see VAZ FERREIRA, 1956) an island where it is sighted very occasionally. In the Indian Ocean lone animals venture into more northerly latitudes and have been recorded up as far as the Mauritius Islands and Rodriguez (VINSON, 1956). According to earlier records lone sea elephants also visit St. Helena (FRASER, 1934-1935).

During a research expedition to Uruguay in 1970 (PILLERI, 1971), we came across an almost intact skull of this species of seal in the village of Los Cerros (P.ta del Diablo, Province of Rocha). It belonged to a seal that had been shot through the head off Isla Verde 33.56 S 53.29 W in the summer of 1969 and stranded the next day not far from the village. We were unfortunately unable to obtain any details as to body proportions, etc. Its hide was described to us as "pale-coloured". Since this specimen was found beyond the northern limit given for the distribution range along the Atlantic coast of South America, at a latitude

rarely visited by this species, we decided to publish the present note with photographs of the skull and a discussion on the values obtained from a craniometric analysis of the specimen (T 515, coll. PILLERI).

GENERAL CHARACTERISTICS

Plate 1 shows the dorsal and ventral views of the skull of T 515, and Plate 2 the lateral view. The mandible—top view and side view—is represented separately (Plate 2). The skull of this *Mirounga* specimen from the Isla Verde is comparatively long and narrow. The palate is narrow and about half the length of the skull. The rostral half of the palate, up to the 5th cheek teeth is hollowed, while the caudal half, with the palatine, is flat. The interpalatine suture is relatively long and measures approx. 27% of the length of the palate. The pterygoid process is small and the palatal aspect of the premaxilla is U-shaped. The lower border of the anterior zygomatic root projects behind the posterior aperture of the maxillary foramen. The condyles of the skull are relatively narrow. An examination of the dentures revealed that the animal was a male.

SKULL MEASUREMENTS

Absolute and relative skull measurements of the *Mirounga* specimen from Isla Verde (T 515) are set out in table 1. The condylobasal skull length is 481 mm and the basal length 451 mm. Maximum or zygomatic skull width is 346 mm, i.e. 76.7% of the basal skull length. The palate measures 228 mm in length (= 50.6%) and 160 mm in width (= 35.5%). The interorbital width is 16.9% of the basal length and the mastoid width 60.8%. The right and left upper tooth rows (cheek teeth only) are 77 mm in length (= 17.1% of the basal skull length).

COMPARATIVE CRANIOLOGICAL OBSERVATIONS

Literature on craniometric investigations of *Mirounga leonina* is very scanty. LYDEKKER (1909) published the skull measurements of some specimens from widely spread localities and divided the species into four races that he distinguished on the basis of their general characteristics and skull measurements (table 1):

1. *Macrorhinus leoninus typicus*. Locality: Juan Fernandez.
2. *M. l. falclandicus*. Locality: Falkland Islands.
3. *M. l. macquariensis*. Locality: Macquarie and (?) Chatham Islands.
4. *M. crosetensis*. Locality: Crozet and (?) Kerguelen and Heard Islands.

So far, however, subsequent authors have not accepted this racial division. As regards the general characteristics described by LYDEKKER and the relative skull measurements, the Uruguayan *Mirounga* specimen (T 515) corresponds approximately to the Falkland form. The few noticeable differences concern the palatal aspect of the premaxilla and the relative length of the palate. The premaxilla of T 515 is not V-shaped and the palate is relatively shorter (50,6%) than that of the Falkland skull (54,9%). However, these two characters are probably variable.

It is possible that LYDEKKER's division of the southern sea elephant into four local races is correct. Further craniological investigations should be carried out to elucidate the still debatable systematics.

SUMMARY

A record of a ♂ specimen of *Mirounga leonina* (T 515, coll. PILLERI) from the Isla Verde (Province of Rocha, Uruguay) is communicated. The general characteristics of the skull and some absolute and relative skull measurements are compared with data published in literature. T 515 presents approximately the same characteristics as those described by LYDEKKER (1909) for the Falkland Island population.

RÉSUMÉ

On cite la découverte d'un exemplaire mâle de *Mirounga leonina* (T 515, Collection PILLERI). Les caractéristiques générales du crâne, ainsi que certaines mesures absolues et relatives du crâne sont comparées à des études relevées dans la littérature. T 515 correspondrait, dans l'ensemble, aux caractéristiques de l'espèce trouvée aux Iles Falkland, telles que les a citées LYDEKKER (1909).

ZUSAMMENFASSUNG

Es wird der Fund eines ♂ Exemplares von *Mirounga leonina* (T 515, Collection PILLERI) bei der Isla Verde (Provinz Rocha, Uruguay) angeführt. Die allgemeinen Charakteristika des Schädels, sowie einige absolute und relative Schädelmasse werden mit Befunden aus der Literatur verglichen. T 515 würde im grossen und ganzen den von LYDEKKER (1909) für die Population der Falkland Inseln angeführten Charakteristika entsprechen.

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TABLE 1. *Skull characteristics and measurements of the Southern Sea-Elephant*

| Author | LYDEKKER (1909) | | | |
|------------------------------|---|--|--|---|
| | PILLERI (1971) | Falkland Islands South Atlantic | Macquarie Islands New Zealand | Catham Islands New Zealand |
| Locality | Isla Verde (Rocha, Uruguay) South Atlantic | Falkland Islands South Atlantic | Macquarie Islands New Zealand | Crozet Islands South of the Indian Ocean |
| No., age and sex, collection | T 515 (PILLERI) | ♂ | ♂ | ♂ |
| Characteristics: Skull | long and narrow | long and narrow | in general same as Falkland specimen | general characters same as Macquarie specimen |
| Palate | relatively short, hollowed in front, flat behind 5th cheek-teeth | long and narrow, hollowed in front, flat in palatine region behind 4th-5th cheek-teeth | hollowed throughout its whole length | broader than Macquarie speci- men, completely flat |
| Palatine | interpalatine suture longer (27% of length of palate) | long median suture (32% * of length of palate) | interpalatine suture shorter (15% * of length of palate) | interpalatine suture longer (23% * of length of palate) |
| Pterygoid process | small | small | much larger | very slender |
| Premaxilla, palatal aspect | U-shaped | V-shaped | V-shaped | U-shaped |

| Condyles | relatively narrow | relatively narrow | wide | extremely narrow |
|--|--|--|---|---|
| Anterior zygomatic root, lower border | projects behind the posterior aperture of the maxillary foramen | projects behind the posterior aperture of the maxillary foramen | | |
| Remarks | | | | this race is alleged to be the largest |
| Skull measurements: | | | | |
| Condylobasal length | mm 481 | mm 508 | mm 457 | mm 419 |
| Basal length | % 107 | % 100 | % 100 | % 100 |
| Zygomatic width (= maxi- mum width) | 346 | 381 | 356 | 356 |
| Length of palate | 228 | 279 | 241 | 229 |
| Width of palate | 160 | 185 | 160 | 165 |
| Interorbital width | 76 | | | |
| Mastoid width | 274 | | | |
| Length of upper tooth row, right | 77 | | | |
| left | 77 | | | |
| | | * value calculated acc. Fig. 183 (LYDEKKER, 1909) | * value calculated acc. Fig. 184 (LYDEKKER, 1909) | * value calculated acc. Fig. 185 (LYDEKKER, 1909) |

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